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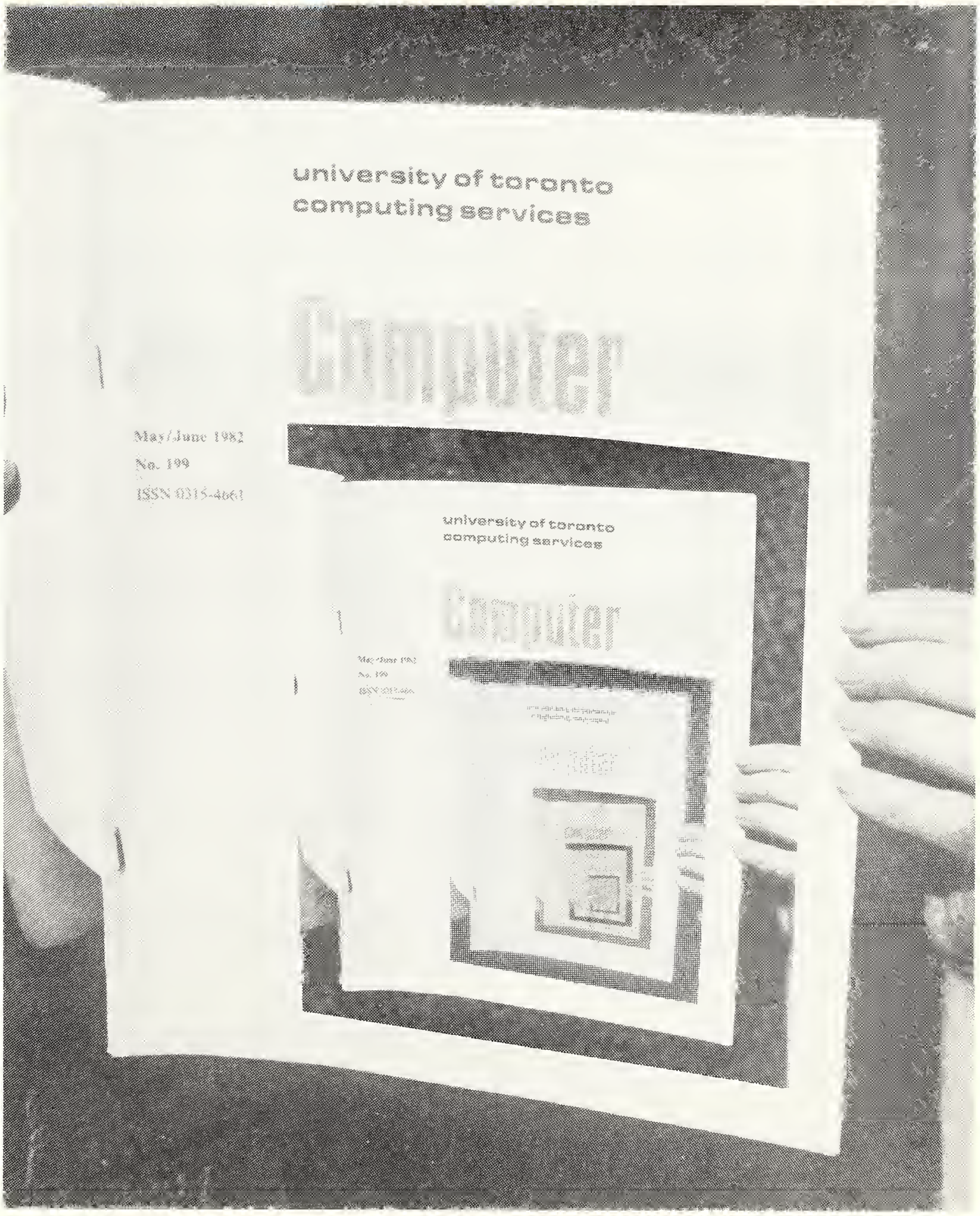

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Cover

Who's reading *your* copy of *COMPUTERNEWS?* See the survey results on page 14.

Thanks go to Jim Bailey for the photography for the cover of this issue, and to Tom Milligan for supplying us with February's fire photo.

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Computing News In Brief

Michigan State University Artificial Language Laboratory

Michigan State University, one of the world's leaders in research on communication enhancement, houses an Artificial Language Laboratory as an extension of its Computer Science Department. Computer technology, applied within this laboratory, is helping people with physical handicaps to overcome communication impairments caused by their disabilities. The present focus for research is voice synthesis and voice input.

Jim Brooks, a Michigan State student of computer science and psychology, has cerebral palsy. He cannot speak and is not able to use his hands. With funding from the state rehabilitation services, Brooks has helped the the lab build a Voice Output Communication Aid (VOCA). VOCA is a computer-based device which synthetically reproduces speech, thereby giving the person controlling it a means of vocal expression. This model is especially suited to Brooks' needs because it is wheel-chair portable.

VOCA has three components: an 80 position pedal, a control and power distribution unit, and a printer/display unit. The entire system is powered by the batteries which run the wheelchair. It is operated with a foot control -- the 80 position pedal -- which moves left to right through 10 positions and backward and forward through 8 positions. The 80 distinct positions correspond to an equal number of letters, words, phrases, and control functions stored in matrix form in computer memory.

When Brooks depresses the pedal, the corresponding symbols are displayed on the printer/display unit. The current position of the pedal is indicated by a blinking symbol on the twenty-character LED screen. (The screen is supported on the wheel-chair by a gooseneck arm.) Moving the pedal back and forth changes the display line, and a symbol can be selected for processing by pressing down on the pedal with extra force.

A second project underway in the Artificial Language Laboratory is aiding Jim Bohr, a graduate student who is paralyzed from the shoulders down because of a spinal injury. To help Bohr in his studies in theoretical chemistry, a group of chemistry faculty members has teamed with the Artificial Language Laboratory to construct a communications workstation which can be operated by voice input or by touching keys with a mouth-held wand.

The workstation is to be constructed in such a way that vocal commands will be interpreted by an 128-word voice recognition system, and will appear in alphanumerics on a video-display unit or a graphics printer. The word processing capabilities which will be built into the workstation will provide Bohr with a variety of text formats and type fonts. In addition, he will be able to write programs for graphs and diagrams needed in his research. An LSI-11 microcomputer (chosen for its compatibility with other systems already available in Michigan State's Chemistry department) is the main processing unit for the workstation.

(The material for this article has been adapted from the Michigan State University Computing Newsletter, "ACRONYMS", March 1982.)

DEUS Training System at the University of Saskatchewan

The University of Saskatchewan has developed a system to help its computer science students write and modify programs more easily and less expensively. Known as DEUS (Data-Entry/University of Saskatchewan), the system enables students to create, modify, and run programs at a

continued...

Computing News In Brief continued

CRT, without time-consuming keypunching or much paper waste.

Robert Kavanaugh, Director of the Department of Academic Computing Services, explains that "DEUS was developed here...to eliminate the need for keypunches which the University couldn't afford to provide in the numbers demanded by our rapidly increasing enrollment." (The university's classload has increased by 35% in the past three years.)

DEUS can accommodate up to fifty users with Volker Craig 404 terminals which are hooked up to an IBM 4341 via a DEC 1170. Student programs, related information, and data are stored by DEUS. An electronic mail system handles the tranfer of messages and assignments between professors and students. Terminal sessions for students are limited to a maximum of forty-five minutes in order to accommodate all users. Once students have exhausted their terminal time, they must wait twenty minutes before DEUS will again accept their log in ID. Kavanaugh intends to add a voice synthesizer to DEUS in order that information about the system can be spoken.

The University of Saskatchewan is not the only satisfied user of DEUS. The system has been exported to the University of California at Berkeley, to Bell Northern Research here in Ontario, to the University of Hawaii, and to the Cray Research Labs in Minnesota.

Keyboarding - Touch Typing at Northwest Missouri State University

With the invention of the typewriter came the "Typing Course". Students graduated from the Underwood manual to the IBM electric with an increase in typing speed. Now, with word processors replacing typewriters on office desks, essential typing is also being replaced by "keyboarding". Northwest Missouri State University has recently developed a computer-assisted touch typing course for its business students in order to take advantage of this development.

Students learn keyboarding using VT100 terminals connected to a PDP-11/70 computer. The course is a Computer Assisted Instruction program written by the staff of the Department of Office Administration at the university, and it is used to teach keyboarding as well as to give remedial practice. The course is highly structured but also very flexible, permitting the instructor to modify each of the thirty-one course lessons according to individual student needs. Otherwise menial tasks of error counting, accuracy checking, percentage counting, performance comparison, and result storage are completed with the help of computer programs in the course. The teacher, relieved of a stopwatch and a pointer, can spend more time assisting the students. The students, on the other hand, can progress more easily at their own speed because the course lessons can be modified to suit their pace.

Mrs. Fitz, the Grade Nine typing teacher at Memorial High, would never have thought it possible, but typing, the essential skill that everyone could use, may have seen its day.

Videotext for Farmers

Manitoba farmers and journalism students from the University of Western Ontario are going to have a little more in common beginning this spring when a videotext news service of current agricultural reports becomes available.

"Westex News", as the service is to be called, will provide a wide variety of agricultural stories to approximately 100 farmers in Manitoba. These stories will include research breakthroughs, new machinery and products, as well as weather reports and updates of government regulations in Manitoba.

Faculty and third-term students in the master's journalism program at Western will research and write the stories using the

continued...

Computing News In Brief continued

school's video display terminals. Approximately 500 news and information sources have been located for this task.

When Westex News begins operation, it will be transmitted daily to Infomart in Toronto, and from there will travel to a computing facility in Winnipeg. The news will reach the farmers' homes via telephone lines. Telidon terminals will be available from the telephone company for a fee of fifty dollars a month. There will be an additional charge for the use of computer time.

Westex News should provide a useful training ground for Western's journalism students, as well as a boon of information for Manitoba farmers.

Ericsson Award

Professor Leonard Kleinrock of the University of California at Los Angeles, and Dr. Lawrence Robert are the co-winners of the L.M. Ericsson Prize. The $35,000 prize and gold medal are awarded for "notable contributions to telecommunications research and development." Kleinrock has been singled out because of his work in developing new techniques for data transmission, his solutions to data traffic problems, and his theories on packet-switching. Robert receives recognition for his work in deriving practical applications from telecommunications technology.

Patricia L. Shore

Spare Cycle Service

A "Spare Cycle Service" (SCS) on one of UTCS' VAX-11/780s is now available. This particular VAX is used for program development, backup, and intercommunication of services related to the support of student computing. Since the full capacity of this machine will not be required during the summer months, the decision was made to offer it to our user community.

The SCS VAX currently provides users access to both FORTRAN and PASCAL. It is expected that the documentation provided by digital Equipment corporation (DEC) will address any information requirements. The service itself is aimed at the knowledgeable customer who can operate self-sufficiently in the VAX environment.

The service is now in operation, and will continue through the summer to August 31. This date may be extended, though, depending upon the availability of capacity. Any continuation of the service through the regular academic year will be priced on a basis to be approved by the newly-established UTCS Review Group.

Users of the Spare Cycle Service may use either their own or public terminals to communicate with the machine. Those who wish to open accounts will be billed at an hourly rate of $2.00 for connect time. A minimum charge of 50 hours of connect time will be levied per month, with an additional charge of $0.01 for each page of printed output generated. All charges for this service are to be paid from real-dollar sources, as opposed to computer allocation funds. Accounts may be opened through Accounting Services at UTCS. Those interested in seeking further information should contact Ian Darwin (978-6134) or Danielle McKenzie (978-8773).

Don Gibson

Hours of Service

The following hours of service are in effect for:

Victoria Day

	May 22 (Saturday)	May 23 (Sunday)	May 24 (Monday)
Academic Services, TSO	10:00-18:00	10:00-18:00	closed
GPJS, HSJS, WYLBUR	10:00-18:00*	10:00-18:00*	unattended
APL, ATMS	10:00-18:00*	10:00-18:00*	unattended
DEC 1090	10:00-18:00*	unattended	unattended

* Running unattended outside these hours.
Normal hours of service for all systems will resume Tuesday, May 25, 1982.

Dominion Day

	July 1 (Thursday)	July 2 (Friday)	July 3 (Saturday)	July 4 (Sunday)
Academic Services, TSO	closed	closed	10:00-18:00	10:00-18:00
GPJS, HSJS, WYLBUR	unattended	unattended	10:00-18:00*	10:00-18:00*
APL/ATMS	unattended	unattended	10:00-18:00*	10:00-18:00*
DEC 1090	unattended	unattended	10:00-18:00*	unattended

* Running unattended outside these hours.
Normal hours of service for all systems will resume Monday, July 5, 1982.

Civic Holiday

	July 31 (Saturday)	August 1 (Sunday)	August 2 (Monday)
Academic Services, TSO	10:00-18:00	10:00-18:00	closed
GPJS, HSJS, WYLBUR	10:00-18:00*	10:00-18:00*	unattended
APL/ATMS	10:00-18:00*	10:00-18:00*	unattended
DEC 1090	10:00-18:00*	unattended	unattended

* Running unattended outside these hours.
Normal hours of service for all systems will resume Tuesday, August 3, 1982.

Labour Day

	September 4 (Saturday)	September 5 (Sunday)	September 6 (Monday)
Academic Services, TSO	10:00-18:00	10:00-18:00	closed
GPJS, HSJS, WYLBUR	10:00-18:00*	10:00-18:00*	unattended
APL/ATMS	10:00-18:00*	10:00-18:00*	unattended
DEC 1090	10:00-18:00*	unattended	unattended

continued...

Hours of Service continued

* Running unattended outside these hours.
Normal hours of service for all systems will resume Tuesday, September 7, 1982.

In the event of any changes to the above schedules, a notice will appear in the July/August issue of *COMPUTERNEWS* and also in HOTNEWS one week prior to the holiday.

Summer hours of service for the University of Toronto will be in effect Monday, June 28 through September 3, 1982. UTCS' office hours will be 08:45 to 16:30 during this time.

PACX Preventative Maintenance Schedule

Preventative maintenance for PACX is now scheduled for Wednesday mornings from 06:00 to 08:00. Therefore, the PACX will be unavailable during that time.

Users connected to the PACX just prior to the maintenance period will receive a message informing them that the PACX will be unavailable. Users who remain logged on, or those that manage to connect to the PACX during the maintenance period, do so at their own risk; they may be disconnected at any time without warning.

After 08:00, when the maintenance has been completed, regular PACX service will resume.

Ron Vander Kraats

COBOL Upgraded

On April 25, 1982, UTCS upgraded COBOL from level ANSI3 to the current IBM OS/VS COBOL level VS. All UTCS-supported features -- that is, COB, COBGO, COBLE, and COBLEGO -- were changed to obtain the new default. However, ANSI3 COBOL will be available for backup purposes, and can be executed with the LEVEL=ANSI3 option in an EXEC statement, such as:

```
// Exec COBGO,LEVEL=ANSI3
```

Although ANSI3 will remain available for the next few months, it should be stressed that IBM no longer supports it. It will eventually be removed from the system after advance notice has been given to users.

The new COBOL possesses several significant extensions, especially in the area of report preparation. Those who frequently use COBOL are urged to obtain the new VS COBOL manual, IBM VS COBOL for OS/VS, GC26-3857. It may be ordered from the Information Office in the Engineering Annex, room 206.

Herb Kugel

IBM JCL Changes

On June 1, 1982, modifications to our IBM JCL will be removed. All of these were originally made in support of functions available in the old MVT system. For the purpose of upward compatability we have continued to support them; however, the cost is no longer justified, given the low use. The changes are as follows:

1. Users of UNIT=INTRDR should instead specify:

   SYSOUT=(A,INTRDR).

   For example:

   ```
   //SYSOUT DD SYSOUT=(A,INTRDR),DEST=EAT
   ```

   The SYSOUT Class ("A" in this example) becomes the default MSGCLASS for jobs submitted through this internal reader. The destination specified ("EAT" in the example) becomes the default destination for jobs submitted through this internal reader. If the DEST keyword is omitted the default destination is CENTRAL.

2. Users of SYSOUT=(A,nnn) should instead use the COPIES parameter. (The second subparameter of SYSOUT is intended only for use by INTRDR -- as in the example above.)

   For example:

   ```
   //SYSPRINT DD SYSOUT=(*,,2018),COPIES=3
   //SYSOUT   DD SYSOUT=*,COPIES=2
   ```

   This example prints three copies of the SYSPRINT file on form 2018, and two copies of SYSOUT on standard forms. Users with more complex requirements should use the control card:

   /*OUTPUT

3. The destinations TSO and WYLBUR will be removed. WYLBUR users who specify the RUN command with the FETCH keyword will not be affected, nor will TSO users who employ the SCHEDULE command with the FETCH keyword. DEC10 IPRINT users should specify:

   /XFR:TSO

   and

   /XFR:WYLBUR

   instead of

   /DEST:WYLBUR.

   GPJS JCL users can use a

   /*JOBPARM QUEUE=FETCH card.

Destinations TS0 and WYLBUR will not disappear on the Administrative MVS machine.

Alex Nishri

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SHARE 58 Report

Los Angeles, March 14-19, 1982

Los Angeles, California was the location of the fifty-eighth meeting of SHARE, the conference for owners of complex IBM hardware. Those members of UTCS who attended were primarily interested in the discussions of VM/CMS, TSO, and MVS enhancements, local area networking, and IMS.

On the timesharing front, IBM has announced TSO/E, the extensions provided to make TSO more usable. This product includes a mail facility, better file control commands, full screen logon for 3270-type terminals, and support for the new 31-bit architecture of the 308x series mainframes. General impressions of this product were not favourable, as most people felt that the improvements offered too little and that they did not really address the major problems that occur in TSO.

Of greater interest were the VM/CMS sessions because IBM indicated strong support for current MVS users in an area that was traditionally DOS-oriented. Microcode enhancements for the 43xx and the 308x series processors make the running of MVS as a "guest operating system" under VM much more attractive. In addition, IBM appears to be strongly inclined to support remote SNA devices and to develop MVS-oriented applications such as VCNA and other VM/CF subsystems. These subsystems would improve the ability of an MVS user to make full use of VM's inter-machine communication features.

The discussions of IMS at SHARE leave one with the impression that UTCS has a very small data base requirement indeed. The "typical" environment considered at the sessions had multiple CPUs running a distributed IMS data base extending to hundreds of 3350 disk drives. Of greatest interest to UTCS was the intimation that IBM is working on more maintainable IMS systems, which will have the capability of altering the terminal network and the set of application programs without bringing IMS down. Moreover, this will be accomplished through the use of a simpler generation procedure.

Local area networking has become a subject of considerable interest lately. Some of the conditions fuelling this interest are the rising cost of cabling, the need to consolidate wiring for different systems (such as CATV, surveillance, and fire control with terminal communication for a reduction in wiring complexity and space), and the need to have a better computer-to-computer interface with flexibility and speed suitable for the networking applications now arriving. Examples of such applications at UTCS are the DEC10 to IBM link, future links between the DEC10, the IBM 3033, and the various VAX systems, and possible personal computer networking on campus.

On the subject of personal computers, the interest in the IBM Personal Computer at SHARE was astonishing. It appears likely that IBM's plan to have three million units sold by 1985 will come to pass, and that it will change the business considerably. IBM appears dedicated to the belief that the small machine will become the chosen personal work station, and is working hard to bring down to the microprocessor level all of the systems which are popular on their mainframes. Subjects such as IMS-distributed data bases, SNA support, local area networking, and intelligent terminal applications were discussed seriously with IBM, and IBM seemed serious in getting as much of this kind of feedback as it could. To this end, a new committee was set up at SHARE to deal with personal computer requirements as a device to be interfaced with large mainframes.

The rapid development in these areas has prompted UTCS to continue its involvement at SHARE, if only to avoid being completely left behind by the technology.

Barry Lay

Toronto DECUS '82

Toronto DECUS '82 was the name given to the Digital Equipment Computer Users Society Symposium held in Toronto from February 9 - 12. For the second time in three years our city hosted the conference, and once again the University of Toronto was well represented, both in the planning phase of the conference and in the presentation of papers. According to post-conference feedback, the 430 conference attendees found it a valuable and enjoyable experience.

Following the tradition established at recent DECUS Canada Symposia, the first day of the conference was devoted to a series of in-depth seminars, or mini-courses. These gave attendees a chance to study a particular topic in much greater depth than is possible in the short sessions of the regular Symposium.

One of the most enthusiastically received of the seminars was "Introduction to Local Area Networks", presented by W. Morven Gentlemen of the University of Waterloo. Attendees appreciated his emphasis on the importance of management issues and his detailed discussion of things to "watch out for".

Other well-received seminars included the discussion of "Data Base Concepts", presented by Tas Tsonis of General Foods, Toronto, and "Introduction to UNIX", presented by Mike Tilson of Human Computing Resources. In addition, the traditional operating system related technical seminars continued to be popular.

The highlight of the conference was the keynote speech given by Professor J.N.P. Hume of the University of Toronto's Department of Computer Science. Pat Hume's perspective on the history of computing in Canada provided an appropriate backdrop for the remainder of the conference. Clearly, his thoughts had an impact on his listeners; his ideas on the future of computing were quoted more than once during the balance of the Symposium.

The Symposium itself consisted of more than 100 sessions. These were split about equally between the traditional, technically oriented, interest streams devoted to product groups such as LCG, VAX/VMS, RSTS, RSX, and RT, and a variety of topics grouped under headings such as General Interest, Management, Office of the Future, UNIX, and Networks and Communications.

There were far too many sessions to discuss here in detail. However, some highlights can be mentioned. One was Rose Ann Giordano, the very impressive manager of DEC's recently reincarnated Large Computer Group, discussing the record of that group's first six months. With Rose Ann at the helm, LCG will continue to do well.

The UNIX sessions were popular and, hopefully, will be a regular part of future Symposia. For example, U of T's Professor R. C. Holt gave a lively presentation on "TUNIS: A Portable UNIX Lookalike." Another U of T speaker was John Bradley of UTCS who discussed his group's experience with SCRIBE, the text formatting package which runs on the DECsystem-10 and on other systems, and with which UTCS is still experimenting.

At one point on Wednesday it looked like noisy phone lines would ruin the Telidon project demonstrations, but in the end they went very well. The excellent films arranged for the Spouses' program were also well-attended.

Personally, I have to say that I found being

continued...

Toronto DECUS ´82 continued

chairman of the planning committee and working with so many talented and dedicated colleagues to be an extremely rewarding experience. Without the commitment of those colleagues, the Symposium could not have been a success. The members of the Planning Committee from UTCS were: Corot Reason (LCG), Robert Lawson (UNIX), Ian Darwin (RT), and Sue May Chong (Spouses/Social). On behalf of all that attended, I wish to thank these people for their efforts.

Dr. Edmund West

Proposed Changes to UTCS Services

In an effort to realign services, UTCS is implementing the following changes:

- As of July 1st, 1982, only 9-track magnetic tape and 8-track paper tape will be supported at UTCS. Users with data stored on 7-track magnetic tape or on paper tape other than 8-track should convert to the supported formats by that date.
- In the near future, the printing of special forms will move from the Engineering Annex to McLennan Labs (the Gould will remain at the Annex). More information on this move will be available at the Annex prior to the changeover.

For further details, please contact your CSR.

Bill Lauriston

Class E Memory Limit Raised to 5 Megabytes

Until recently, the largest region that could be requested in a Class E job was one megabyte. This limit has now been increased to five megabytes.

A /*SETUP statement must still be included in any job that requires more than 500K of memory. Other Class E limitations, including the two-hour time limit, still apply and are described in USERBOOK Section 3.3BATCH.

Class E Characteristics

Class E is a batch service provided on the IBM 3033 computer. Its purpose is to provide low-cost computing to users with large jobs. All software available under Classes A, B, and C is also available under Class E.

In Class E, there is no charge for memory usage and the CPU charging rate is currently only 85.8 cents per minute. Charging for I/O usage, unit record, and peripheral device services is based on standard rates with a service factor of 0.75. Class E jobs are subject to a minimum charge: if the total charge, less the unit record charges, falls below $15, the total charge is set to $15 plus the unit record charges.

Class E jobs are, for the most part, executed on a first-in, first-out basis unless the job at the top of the queue cannot be started because necessary resources (e.g. tape drives) are not available. In such a case the operator may start the next job in the queue if the resources are available to allow it to execute. Class E jobs receive a lower level of service than Class A or B jobs; only if resources are not needed by the latter classes will they be made available to Class E jobs. Thus Class E jobs are usually executed on weekdays after midnight. Additionally, Class E jobs are often run on weekends and, occasionally, during weekday evenings before midnight.

continued...

Class E continued

We would ask our users to note that Class E is only available to University-funded account holders.

Bob Chambers

Class C Summer Specials

Class C is another low cost service offered by UTCS. Class C jobs incur no charge for the CPU time used; other charges are levied at standard rates with a service factor of 0.75. A job will cost less if it is run under Class E rather than under Class C if (i) it uses more than approximately 70K of memory, and (ii) the Class C total charge, less the unit record charges, is greater than $15. In the summer months (June-September), the Class C rate for memory usage is reduced.

This summer, Class C users will be able to take advantage of our special summer Class C service. During the period of May 31 to September 31, Class C memory will be charged at **half of the usual rate** and the hours of service for Class C will be significantly expanded. During this period, the memory value in criterion (i) will become 140K.

For full details regarding the summer service changes for Class C, please contact your CSR.

Note, that as with Class E, Class C is only available to University-funded account holders.

Bob Chambers

Erratum

The following is a correction to the article in the March/April Issue of *COMPUTER-NEWS* entitled "Recommended procedure to follow failure of an APL Workspace".

This article was taken from APL HOT-NEWS Item #100. An error was made in the third paragraph of the article; the first two sentences of that paragraph should read as follows:

Immediately rename the workspace and save it. The new name must not conflict with the names of workspaces already saved in your library.

Mary Ann Lawry

Summary of APL HOTNEWS Items

The following is a list of HOTNEWS items entered between March 10, 1982 and April 20, 1982:

Date	**Title**
29/03/82	A cold start of the system will be done, 18:00, April 11, 1982.
05/04/82	Hours of service for the Easter weekend.

continued...

APL HOTNEWS continued

06/04/82 The Bouncing of overdrawn and idle APL tasks.

APL HOTNEWS may be accessed by loading the workspace, 1 HOTNEWS. For example, to print the news of November 28, 1981, type: NEWS '28/11/81'. To print all news items since October 1, 1981, type: NEWS SINCE '01/10/81'. For more instructions on the use of this workspace, please see the variable DESCRIBE.

Mary Ann Lawry

The Bouncing of APL Tasks

On Monday, April 12, 1982, the following two changes to Sharp UTCS APL services were implemented:

1. Any T-task which has been idle for more than 30 minutes will now be Bounced (APL terminology for "terminated").
2. Any task run on a non-overdraftable account which has used up the money allocated to that account will now be Bounced. If the task to be Bounced is a T-task, a warning will be sent shortly before the Bounce is executed.

There are several advantages to this change. The first is that it makes APL conform with the policies of other UTCS services, which generally disconnect idle tasks. The second advantage is that ports will be freed to allow other users onto the system. Finally, this change reduces the amount of connect time which will be charged to tasks which have accidently been left running.

Once a non-overdraftable account has used up the money allotted to it, no tasks may be started on that account. The workspaces and files associated with that account will remain intact and accessible from other accounts. In the past, it was possible for a task to be started on a non-overdraftable account with, say, an 80 cent balance. The task could then exhaust this balance, but remain active for several hours accumulating a sizeable overdraft. However, this new procedure will prevent such overdrafts from occuring.

Mary Ann Lawry

Manual Sales

In the past, the university community has looked to the Information Office as the focal point of computing documentation. While centralization was once desirable, the trend toward single locations for computing and computing supplies is declining. Therefore, in a process that we expect to be gradual, the University of Toronto Bookstores will assume responsibility for documentation sales and distribution.

Effective immediately, instructors should place orders for USERBOOK sections and other documents required for instructional purposes through the Bookstore. Any orders phoned in or sent to the Information Office will be forwarded to the Bookstore.

The publications: 3.6HSPLC, 3.6HSSPK, 3.6HSWATFIV, and the LIBRA manual will be available at the Bookstore.

continued...

Manual Sales continued

The Information Office will continue to keep a small supply of frequently requested documentation available for sale at the same price that the Bookstore charges.

David Reed

Series/1 Document Available

In public terminal areas, users may access the interactive services offered on the IBM3033 via the Series/1 3270 emulator.

A guide to using the emulator is now available in the Information Office.

COMPUTERNEWS Survey Results

The results of the *COMPUTERNEWS* Reader Survey have been collected and tabulated. There were 46 replies to the questionnaire, with comments ranging across a broad spectrum.

These are the highlights of the tabulation:

1. 24 people wanted to see more of **Computing News in Brief,** while 16 thought that it was of proper length already. As a result, it will be expanded to perhaps as much as two pages, interesting articles permitting.
2. 23 people felt that they were getting sufficient information from the **Change Committee Reports,** so these reports will not be altered.
3. Although only 8 people wanted to see more of **APL HOTNEWS Summaries,** an expansion of the news so that the text is included is in order. This expansion is compatible with increased coverage of gripes from other systems.
4. 20 people thought that we should have fewer **N Years Ago** features, and hence the column will be dropped unless something really newsworthy is found in our archives.
5. A total of 30 people liked the **DEC-10 Gripes.** A majority of those who wanted to see more gripes also wanted to see more news from other systems; hence, we will expand APL news and include WYLBUR suggestions.
6. 42 people like **Letters to the Editor.**
7. **User Profiles** seem to be popular with about 80% of the respondents. The Profiles add a great deal of depth to *COMPUTERNEWS* and, as a result, there will be one per issue, as long as they can be kept interesting.
8. **Short Course Announcements** are occasionally read (10) by some, and always read (35) by others.
9. **Personnel Changes, DCS Library Acquisitions,** the **Systems** listing, and the **UTCS Directory** listing are standing copy - they're there every issue. The response to these features on the Never - Occasionally - Always scale was at the Occasionally - Always boundary. Coverage of these will remain the same, although Erindale's VAX will be added to the listing.
10. It would appear that the average respondent to the survey is employed by the university as a researcher or instructor, subscribes to *COMPUTERNEWS,* and, when he does pass the latest issue around, it gets read by about 2.5 people.

Some of the requests received are not only possible, but probable in upcoming issues of *COMPUTERNEWS.* In the "more" category we have people wanting UNIX articles, graphics news, office automation and word processing news, pictures, highlights

continued...

Survey Results continued

of obscure programs and facts, gripes on other systems (see above), and, interestingly enough, an "Editorial Index" so they can find what they're looking for without having to read the past twenty issues.

Comments were, for the most part, quite favourable. The high calibre of writing was mentioned more than once, as were features such as **Computing News in Brief** and the **User Profiles.** Suggestions for User Profiles will be welcomed.

A comment that came up more than once was "Why are the back covers always upside-down?" When the newsletter first came out, it was stapled shut so that it wouldn't open in the mail. Then someone realized that they were performing a duplicate operation by both putting on a mailing label and stapling - clearly the mailing label could act as a staple. Since the right side of a printed label is likely not to contain any printing, the label had to be turned upside-down to be affixed to the issue. Otherwise, the label would have been on the front cover, rather than the back. Of course, therein lay the dilemma, for if the back cover was rightside-up, the mailing label would be upside down. Thus the solution - an upside-down back cover, and no more staples - was decided upon.

David Reed

UTCS Short Course:

Introduction to Data Base Concepts

This is an introductory course designed both for those with no background in Data Base concepts or the "Data Base Management System", as well as for those who have some familiarity with these concepts.

Topics will include:

What is a Data Base?
What can a Data Base Management System do for you?
Overview of Hierarchical, Network , and Relational Models
Data Dictionary,
Security and Integrity of Data
Information Systems vs. Production Systems
Data Base Sublanguages

Class exercises will involve the use of SEQUEL and QUERY from the ralational model. No prior knowledge of any DBMS is required. The course will consist of a series of 1 1/2 hour sessions over a period of 2 consecutive days, depending on demand. The cost for the course will be ten dollars. Those who are interested should contact the Information Office at 978-4990 to register.

Paul Roth

Data Base at UTCS

What is a Data Base Management System?

A Data Base Management System (DBMS) is a software product designed to address the commonly encountered problems listed below:

1. Programs and data collections are set up as the need for them arises. This can result in 'data redundancy' as the same data may reside in several different collections, causing inconsistencies and increased costs of data entry and storage.
2. In order to access a given set of data, the internal structure of the data collection(s) must be known by the accessing program (and programmer). Thus, sharing of data among related applications is difficult, and data effectively becomes the property of the specific programs written to process the data.
3. A multitude of similar programs are written to perform similar tasks for each collection of data. Each is different due to the differences in structure across collections. Therefore a change to the structure of a given data collection causes entire sets of programs to be modified.

To solve these problems (and others), the DBMS takes sets of related data and integrates them into an organized whole. The definition and maintenance of data occurs independently of the programs that operate on it ('data independence'). Each user can have his/her own view of the data, providing an immediate measure of data security.

The DBMS maintains the integrity of the data through a combination of internal consistency checks and external authorization schemes for those users updating the data. The data is stored in a standard form, online, thus allowing *ad hoc* queries to the data collection through the use of online user interfaces ('sublanguages'). If full-screen access is available on user terminals, data entry can be done via preformatted screens built using the DBMS sublanguage. Sophisticated validity checks can be incorporated, if necessary, through the use of calls to a host language (PL/I, FORTRAN, etc.). Commonly used can be built for reporting or transaction processing, using the sublanguage and/or the host language interface.

Data Base at U of T

Over the past year, it has become evident that Data Base has become a matter of some interest within the U of T community. UTCS has been investigating and evaluating several different DBMS' to keep abreast of developments in this growing area.

To satisfy the interest of our many users, UTCS will be conducting a seminar on Data Base which will explain the various Data Base concepts in an introductory fashion. If you would like to get a better understanding of this facility or if you are aware of some of the concepts and would like a fresh look at Data Base, we encourage you to attend.

For those of you who have some knowledge of Data Base, or if you think you have an application that might be satisfied by a Data Base Management System, please fill out the Data Base Survey opposite. Your response will help us determine the level of interest in Data Base at the university.

Paul Roth

IBM SAC Password Changing

Users who wish to change their IBM GPJS SAC password can now do so on their own. A new program, CHNGPSWD, will allow immediate change of the password as used on the GPJS jobcard, for signing on to WYLBUR or ATMS, or with the ALLOC / CONVERT / REGISTER / SCRATCH programs.

In order to use CHNGPSWD, the SAC involved must have been given CHANGE privileges by the CAN holder. The new password must consist of three or four characters and cannot include any digits.

To use CHNGPSWD from batch to change the password for SAC 1234 from OLD to NEW, you would code the following JCL:

```
// EXEC CHNGPSWD
//SYSIN DD *
1234,OLD,NEW
/*
```

WYLBUR users can use "DO CHNGPSWD", to be prompted for their SAC, old password, and new password. TSO users can use the "CHNGPSWD" CLIST. For more information, TSO users should type "HELP CHNGPSWD" while WYLBUR users should type "DO CHNGPSWD?". Both the TSO and WYLBUR version of CHNGPSWD will prompt for the new password twice to ensure that there are no transmission errors.

Care should be exercised whenever CHNGPSWD is used. If you forget your new password you may be unable to use your SAC. Users requiring assistance with their accounts should contact the Accounting Office at 978-8703.

Alex Nishri

UTCS Change Committee

1. Weekly PACX maintenance is now scheduled for Wednesdays between 06:00 and 08:00. (See article, page 7.)
2. UTCS will be evaluating the possible discontinuation of 2400 drive (9-track 800 bpi) tape service. People who use 9-track 800 bpi tapes are asked to advise their CSR so that a fair evaluation of the need to maintain this service can be carried out.
3. The LIBRA/VAX and SCS/VAX have had their parity checking changed from ODD to EVEN to make them consistent with other UTCS services.
4. COBOL on the Academic and Administrative IBM systems was upgraded to OS/VS COBOL level VS in late April. (See page 7.)
5. BMDP has been upgraded to the '81 version.
6. 1/4 meg of memory has been added to the PDP/11, bringing it up to 640k.
7. 1 megabyte of memory has been added to the SCS/VAX, bringing it up to 4 megabytes.
8. Work is continuing on the consolidation of autobauding on the DECsystem-10. CLASS 11 is now equivalent to CLASS 10. CLASS 12 has not been autobauded yet but, once this is done, CLASSes 11 and 12 will be discontinued. Autobauding on the SCS/VAX has been completed. The SCS/VAX is accessible at all three speeds with CLASS 62. CLASSes 60 and 61 have been discontinued. Autobauding the PDP/11 access ports will also be done, and PACX will disconnect on LOGOUT.
9. Non-overdraftable APL account users will now be "Bounced" if their ac-

continued...

UTCS Change Committee continued

counts zero during a session. T-Tasks which remain idle for 30 minutes will also be Bounced. (See article on page 13 of this issue.)

10. IBM Academic machine users are now able to change their own SAC passwords. One-way password encryption will also be enabled later this year. (See page 17.)
11. The current DECsystem-10 prime-time memory restriction was restored to 210 pages on April 19 due to reduced load on the system at end of term.
12. Another disk volume is to be made available to IBM Academic System users to relieve the current space shortage. The new volume will be called USER10.
13. The traditional 50% reduction on Class C memory usage (summer rate) will be set at noon on May 31. The rate will revert to 100% on October 1.
14. Problems with the new IBM VS-FORTRAN Level 77 compiler have set back its installation date.
15. UTCS is currently converting the mountable APL drives to fixed-media drives.
16. The Series/1 installation was completed on April 17.
17. The SCRIBE test, which was delayed earlier in the year due to its impact on a busy system, was re-initiated on April 19.

Terry Farley

DEC Microcomputer Discount Agreement

In conjunction with the Purchasing Department, the Communications and Small Systems Group has arranged a discount agreement on the purchase of microelectronic equipment for the university. Under the terms of the agreement, all equipment sold by the Microcomputer Product Line Group at Digital may be purchased at an approximate 30% discount on most items in the product line.

The products covered by the agreement include the LSI-11/2, LSI-11/23 and FALCON microcomputers as well as the QBUS peripherals. Digital will present a seminar to describe the agreement and the product line in May.

Readers are reminded that Communications and Small Systems offers a minicomputer and microcomputer consulting service to members of the university community. The group also undertakes custom hardware and software projects to satisfy unique user requirements. CSS can configure, install, and maintain LSI-11-based microcomputer systems.

Ron Vander Kraats

Two Tin Cans...and a Piece of String

(This article has been adapted for *COMPUTERNEWS* from the Arizona State University newsletter, "INTERFACE", Volume 8, numbers 10,11,12, Winter 1981-1982. It was originally compiled by Mary Rushton.)

Trying to communicate with a computer is like trying to talk with a multilingual, deaf, dumb, and blind man trapped in a windowless, doorless room. First, you have to find a way to get your message to him. Then, because the man can perceive so little - only electrical impulses - you have to determine what form your message should take. And, before the man can understand you, you must tell him which language (code) you'll be using. (Remember, this is **before** he can understand you.)

continued...

User Survey of Potential Data Base Applications

I. The questions below will help us to determine the type of users requiring a Data Base Management System (DBMS). Please indicate, with a check mark how you would categorize your applications.

1. Research _____(1) Educational _____(2) Administrative _____(3)
2. Within U of T _____(1) Outside U of T _____(2)
3. What department/faculty are you in? __________
4. My experience with data base has been: (check highest only)

   Nil _____(1)
   Reading only _____(2)
   Some contact _____(3)
   Experienced user _____(4)
   Experienced designer _____(5)
   Have acted as a DBA _____(6)

5. If you have used DBMS before, what systems have you used or are familiar with?

   IMS _____ TOTAL _____ ADABAS _____ RDM _____
   INGRES _____ MISTRESS _____ IDMS _____ SYSTEM 2000 _____
   ORACLE _____ NOMAD _____ RAMIS II _____
   Other(s) _____ _____ _____ _____

6. Have you ever participated in a study which evaluated one or more DBMS? (Y,N) _____
7. What languages are you familiar with?

   FORTRAN _____ COBOL _____ PL/I _____ APL _____
   C _____ PASCAL _____ IBM Assembler _____ BASIC _____
   Other: please specify _____ _____ _____

8. What size of machine would you envision runing your applications on?

   Personal computer/micro _____
   Mini (e.g. PDP-11) _____
   "Small" mainframe (e.g. VAX) _____
   Large IBM mainframe _____

II. Please answer the following questions with Y for yes, N for no. If it is not applicable or you don't know, please leave the response blank.

1. Is your application likely to be primarily online? _____
2. Is your application likely to be primarily batch? _____
3. Do you foresee your application as a distributed system entirely under your auspices? _____
4. Do you foresee your application as part of a distributed system, sharing data with other users not under your control? _____
5. Is your data frequently updated? _____

6. Which of the following security features would you envision using? (Y=yes, N=no, blank if not applicable or don't know)

   a. Protection of user ID, passwords _____
   b. Audit facilities and journalling _____
   c. Access control (e.g. restricting UPDATE, READ, etc. at different levels of data) _____
   d. Encryption of data and/or transmitted data _____
   e. Redundancy _____

7. Would you require different users to have different views of data? _____
8. Would a phonetic search capability be useful in your application? _____
9. Would you need to communicate with other DBMS and/or file management systems? _____
10. Does you data need to be accessed by more than one user at the same time? _____

III. The questions below pertain to the features of your application system, insofar as it can be classified as a production system or an information system. Please indicate Y, N or blank for each:

1. High volume of transactions _____
2. Efficiency of processing is important _____
3. Simple interactions, only, are required _____
4. Online data entry _____
5. Up-to-date data is mandatory _____
6. Mostly canned procedures will be used _____
7. Summary information could be updated periodically _____
8. Interaction tends to be ad hoc and complex (flexibility required) _____
9. Updates may be offline _____
10. Ease of use is an important criterion -- no intermediary (programmer) necessary _____
11. Instantaneous response is important _____

IV. Rank your application on the possible reasons given below for using a DBMS; use a scale of 1-8 where 1 is highest priority, 8 is the lowest.

1. Respond better to *ad hoc* queries and report requests. _____
2. Centralize data _____
3. Increase security _____
4. Reduce maintenance effort _____
5. Control data redundancy _____
6. Increase level of validity of data _____
7. Provide more flexibility in structure and storage of data _____
8. Reduce programming effort for new programs _____

V. Since the questions below involve the number of items and overall size of your data, they can be best answered by those already familiar with some aspects of data base design.

1. Data base size (in thousands (K) or millions (M) of bytes (e.g. 10M for megabytes) _____
2. Number of transactions per month _____
3. No. of entity types in the model (i.e. discrete data items) _____
4. No. of relationship types in the model (i.e. pointers between data items) _____
5. Average record size _____
6. No. of record occurrences _____
7. Would you classify your envisioned model as (H) hierarchical (N) network (R) relational or (C) some combination of the above _____

VI. If you see yourself as a potential user of DBMS, please fill out the section below:

Name: ______________________________

Address: ______________________________
____
____
____

Phone: ______________

Other comments: ______________________________

____

____

Thank you for your participation in this survey.

--- FOLD HERE -----------------------------------

Please return the completed survey by June 18, 1982, to:

Paul Roth
c/o UTCS
Room 201
49 St. George Street
Toronto, Ontario
M5S 1A1

Two Tin Cans continued

Hardwired Terminals

Getting the message inside the room is the first problem. Since the computer uses only electrical signals, you might assume that the simplest solution is to run a wire between the terminal and the computer. This is often done; the process is called **hardwiring** a terminal.

What's more, these wires are used to solve many coordination problems. In addition to transferring data, they transmit enough information about the status of the terminal and the computer to ensure that the data is not garbled. Wires send and receive data, and signal when data may be transmitted or received. Usually, between 4 and 25 wires are used.

Hardwiring, though straightforward, imposes certain restrictions. Because the signal weakens over distance, the cable usually cannot exceed 50 feet. Also, in most cases, once a terminal is hardwired to one computer, it cannot be connected to another unless it is outfitted with a switchable line.

Modems and Dial-Up Terminals

When hardwiring isn't appropriate, you can use a telephone line to communicate with the computer. However, while a phone line solves the distance problem, it raises some others. Telephone lines were designed to transmit the human voice, an analog signal that varies continuously over a wide range. Terminals and computers, on the other hand, produce and understand only digital signals, or electrical impulses called "bits" that are either "on" or "off", "1" or "0".

Modems (short for MOdulator-DEModualtor) transform one kind of signal into another. Two modems must be used, with one at either end of the telephone line.

There are two basic kinds of modems used with terminals: those that hook into the phone lines directly (called **datasets**), and those that connect to the phone lines through the handset of a standard telephone (called **acoustic couplers**).

Datasets are electrically connected to the phone lines, just as are telephones. Because they use public phone lines directly, they are not portable (although some modems have modular phone jacks and thus can be used wherever such a jack will fit). However, they transmit signals very efficiently. Since they use the telephone line directly, they encounter little noise and distortion, and thus can handle very fast signals (or high baud rates, which we'll discuss later).

The other kind of modem, an acoustic coupler, goes through the intermediate step of translating the electrical signal into sound, which can then be fed into the standard handset of a telephone. This type of modem is the least expensive (at least compared to other modems that transmit information at equivalent baud rates), and it is portable (it can be used anywhere there's a telephone). But it's somewhat subject to distortion, and, because it must filter out so much "noise", it can only transmit comparatively slow computer signals (300 baud is the limit for most acoustic couplers).

Duplex

We now have a way to reach the man in the little room. However, we also want to reach him efficiently, which leaves us another choice to make: do we want the link to be full-duplex or half-duplex? You've probably bumped into the term "duplex" at some point: it's a duplex problem if, when you enter a character, the terminal either prints it twice or doesn't print it at all.

Basically, duplex refers to the channels through which information is sent. In full duplex mode (the more efficient way), information can be sent both ways on the same channel at the same time.

For your typing to be reproduced accurately at your terminal, both terminal and computer must be set in the same mode. That's because in full-duplex mode, the terminal

continued...

Two Tin Cans continued

transmits everything you type to the computer without displaying it. The computer is set to remote echo or echoplex. This means that it echoes back to the terminal both your typing and its response, which are then displayed. In half-duplex mode, the terminal both displays your typing and sends it to the computer; the computer (set to local echo) returns only its response.

If the terminal is set to half duplex and the computer is set to remote echo, your input, when printed, will appear doubled. If the terminal is set to full-duplex, and the computer is set to local echo, your input won't appear at all. Usually both the terminal **and** the modem have duplex switches. For full-duplex operation, **both** switches must be set to full-duplex. For half-duplex operation, however, one switch must be set to full-duplex and the other to half-duplex. If you have to reach into the terminal with a screwdriver to change the duplex, leave it on full-duplex and change the modem's duplex as needed. If you have a convenient duplex button on the front of your terminal, leave the modem on full-duplex and change the terminal.

Character Codes and Parity

We said earlier that computers are "multilingual". In this case, we're referring not to high-level languages like FORTRAN or PL/1, but to the differing patterns of 1's and 0's into which each character is transformed when you enter it at the terminal. Most terminals use one of the two sets of patterns (codes): ASCII or EBCDIC. (Actually, most terminals use ASCII; EBCDIC is used by only a few IBM or "IBM-compatible" terminals, such as IBM 3270-type terminals.)

Internally, though, each computer uses a different code. The PDP-11/70's use ASCII; the IBM uses EBCDIC. WYLBUR and TSO, however, automatically convert the characters from ASCII to EBCDIC, and back again.

Since both the terminals and the computer speak ASCII, we might assume that they will hve no problem communicating; but there are, in fact, several dialects of ASCII. In addition to the standard 7-bit code (often called the data bits), a terminal also sends a start bit, an eighth data bit (optional), a parity bit (optional), and 1 or 2 stop bits. Several combinations are possible.

Terminals and personal computer communication boards can be set to the different patterns of bits. Many personal computers must be reset because they have a default value of a start bit, 8 data bits, and 2 stop bits (for a total of eleven bits per character). Some home computers have little mechanical switches on the board itself; others can be changed through software. When reading your manual you may not find any reference to the start bit, because it is the same on all terminals and boards. When the terminal switches will be set, we are now speaking the same language as the man in the little room. Now we only have to let him know how fast we will be talking.

Baud Rate

Baud rate refers to the speed at which information is transmitted to the computer: for example, 300 baud means that 300 bits (or electrical impulses) are transmitted each second. Since one character consists of 10 bits, 300 baud also means 30 characters per second. In general, interactive terminal baud rates range from 110 to 9600 or more (although 1200 usually is the limit for non-hardwired connections).

After indicating the rate at which we will be speaking, the avenues of communication are open between us and the "multilingual, deaf, dumb, and blind man trapped in a windowless, doorless room". And all before he can "understand" us. It's a far cry from two tin cans and a piece of string!

DEC-10 Gripes

Gripe:

What is the meaning of the message:

```
%SCNNON No option COJOB
```

that I get in log files from MIC COJOBs?

Gripe answer:

When MIC logs in a COJOB, it looks in your SWITCH.INI to see if there is a line of the form "LOGIN:COJOB / switch / switch". If there isn't one, this message is output. There are, however, no ill effects as the message is merely informative.

Gripe:

I'm having some difficulty getting a 1200 baud line. Often, I get only lines of x's and assorted characters. In asking for Class 10, the speed I'm working at isn't being read correctly. Can this be corrected or is it just a matter of trying until the connection is made?

Gripe answer:

There is one Class 10 line which appears to have difficulty recognizing the baud rate of the user at the first (or any) <CR>. We don't know which one it is, so if anyone encounters it please switch the baud rate down to 300, and run INITIA to determine the LINE (not TTY) number. Please report this number to the DEC-10 operator.

Please note also that once a proper connection has been made, baud rates can be changed only by monitor commands.

Gripe:

IPRINT accepts a limited number of files per job. This is not indicated on the HELP file, but comes back as an error message indicating that too many files were submitted. What is the limit on the number of files? Also, is there a limit to the number of blocks or bytes that IPRINT will accept from the DEC and, if so, what are these limits? For each IPRINT submission to the XEROX 9700 there is a charge over and above the pages printed. On a large number of small files this can become costly.

Gripe answer:

The limit is 10 files at a time. Usually, a large number of files are indicated on an IPRINT command by a wildcard, so use the COPY command to append multiple files over the limit. If you want to insert page skips between files (to be compatible with the /THROW switch), then you can use SOS or another editor to insert them.

There is no limit on IPRINT output on any job, other than the maximum limit imposed by the 9700, such as in this case. There is a very large limit on what can be sent over the link without operator intervention (i.e. 60000 of the units reported at the end of each IPRINT job). The extra charge on IPRINTs to the 9700 is a per-submission charge levied for the 9700, and is not directly related to IPRINT. If you wish to discuss this further, please contact your CSR.

Gripe:

For some time now, I have been submitting jobs to the IBM in the form :

```
.sub ibm:=jcl,program,data
```

where the file data has had "//GO.SYSIN DD *" at the head. Now it seems that I must concatenate these files before submitting, otherwise the data file is read as a continuation of the program. What is happening?

continued...

DEC-10 Gripes continued

Gripe answer:

There are two possible reasons for misinterpretation of files by the QUEUE program which handles SUB IBM:.

If the extension of a file is .DAT, then without the line:

QUEUE /NOLOG/FILE:ASCII

in one's SWITCH.INI, the first character in each line is interpreted as an ASCII printer control character and is thus ignored as data. This might explain the above phenomenon.

The second possible reason is only rumored to exist: i.e., the spooler has been reported to lose the first line of a concatenated file at times. However, no direct evidence has been submitted to support this. If this does happen again, and the first reason does not explain it, then please contact Advising at 6465.

Gripe:

The quality of the IBM link is deteriorating. The software needs attention, and the operators should be instructed to check it constantly.

Gripe answer:

The DN61 has had an intermittant hardware problem. About twice a week it halts for reasons unknown. We are working with DEC to try to determine what's wrong.

Gripe:

Could the message given on LOGOFF (for 45 minutes idle) include the job number? This would permit explicit invocation of ATTACH. Also, how can one get the SWITCH.INI terminal setup re-performed? My SWITCH.INI includes:

"INITIA/SETTTY/TYPE:VC303A"

but none of INITIA, INITIA SETTTY, or INITIA/SETTTY restore my terminal type.

Gripe answer:

If a job is logged in and its controlling terminal is idle for 45 minutes, the job will be detached. The job number is printed on the terminal.

We tried a SWITCH.INI with the line "INITIA/TYPE:VC303A", and then typed I/SET. This seemed to work, setting the type to VC303A when I TTY displayed settings. So please try again.

Gripe:

Can you place an ACCESS.USR in a SFD? If so, will it work on UFD as usual? Will the ACCESS.LOG message be created in the UFD or in the SFD that the ACCESS.USR is in?

Gripe answer:

The ACCESS.USR in your SFD cannot influence files in your UFD, since the file DAEMON will not locate that ACCESS.USR in the directory of the file to be accessed. The ACCESS.LOG is created in the same directory as that in which ACCESS.USR is found.

For more information, please read the first few pages of DOC:FILDAE.MEM.

Gripe:

I know that you can put "^X" in a file to clear the screen. I want to know if you can do the same thing with "^C".

Gripe answer:

The only plausible reason for placing a "^C" in a file is to exit a program while in MIC. However, a real "^C" is not necessary in MIC files since a "^" immediately

continued...

DEC-10 Gripes continued

followed by “C” is interpreted as a Control-C by MIC for the purpose of transmission to the running program. Please note that Control-C does not effect an exit from SOS. It is ‘caught’ by SOS and you are given the prompt: “Yes? (Type H for help):”.

If you really do want to put a Control-C in a file with SOS, go into alter mode on the line and place the cursor where you want the “^C” to appear. Then type a single quote followed by a “C”. This is probably only useful for submitting batch jobs into the background or in a user created program.

Gripe:

I tried to “R GRIPA” and received instead:

```
?GPAFNF Gripes file not found
  Please contact Timesharing Advising at 6465

EXIT
```

What happened?

Gripe answer:

Sorry about this, but when the automatic searching of DSKC by all users was eliminated, the GRIPA program was not changed to compensate. This has now been rectified. Similarly, other parts of the gripe answering system were disabled and only users submitting gripes from DSKC were noticed for a while. This has also been corrected.

Andy Rice

User Information Exchange

For Sale:

Diablo 1620 printer, plus manual and several daisy-wheels. Needs new carriage (Xerox technical service estimate $842). Best offer. Contact Russ Wooldridge at 978-6639 or at the Department of French, 7 King’s College Circle, room 2201.

Personnel Changes

Hello

Several new Keypunch Operators have started working at UTCS. They are **Purie Mamaril, Gina Choong, Elizabeth Coulter,** and **Grace Wong.**

A little late but not forgotten: **Joan Coutts** started working as an I/O operator at the Engineering Annex several months ago.

A new co-op student from the University of Waterloo, **Kimberly Kippin,** will be working with Information Services for the summer months.

Goodbye

Ten years ago **Ward Beattie** started working at UTCS. Ward, the Systems Manager, has left and is now working for DMR. The best of luck in your new job, Ward.

Another long time employee, **Paul Scobie,** has left UTCS. He was a senior operator McLennan Labs. Good luck at the Continental Bank.

Our co-op student, **Pat Shore,** has finished her work term here in Information Services and will return to Waterloo to continue

continued...

Personnel Changes continued

school. Hope to see you back in September!

Promotions

Michele Mule will take on new responsibilities soon as a secretary in our management offices. Michelle worked previously in Accounting Services.

Betty Chan, previously a Keypunch operator, is the new Data Entry Supervisor at 215 Huron Street.

Kathryn Bourne

Recent Acquisitions in the DCS Library

ACM Symposium on Principles of Programming Languages, 8th, Williamsburg, Va., Jan. 1981.
Conference record,
New York, ACM, 1981.

American Society for Information Science.
Proceedings of the annual meeting.
v. 18(1981)

Barrett, W.A. and Couch, J.D.
Compiler construction: theory and practice.
Chicago, Science Research Assoc., 1979.

Bowen, Kenneth A.
Speaking Pascal.
Rochelle Park, N.J., Hayden Book Co., 1981.

Bradley, James.
File and data base techniques.
New York, Holt, Rinehart and Winston, 1982.

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